

IN THE CLAIMS

Claims 1-6 (Cancelled).

7. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

forming solid-electrolyte layers a first set of gel-electrolyte layers on both sides of a positive electrode collector;

forming solid-electrolyte layers a second set of gel-electrolyte layers on both sides of a negative electrode collector;

forming a positive electrode comprising the first set of gel-electrolyte layers on both sides of the positive electrode collector;

forming a negative electrode comprising the second set of gel-electrolyte layers on both sides of a negative electrode collector;

laminating said positive electrode and said negative electrode such that one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers one of said solid-electrolyte layers formed on said positive electrode and one of said solid-electrolyte layers formed on said negative electrode face each other;

winding said positive electrode and said negative electrode such that another one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers of said solid-electrolyte layers formed on said positive electrode and another one of said solid-electrolyte layers formed on said negative electrode face each other; and

subjecting said wound electrodes to heat treatment so that each of the first set of gel-electrode layers and the one of the second set of gel-electrolyte layers facing each other

said solid electrolyte layers formed on said positive electrode and said solid electrolyte layers formed on said negative electrode are integrated with each other into one continuous seamless layer,

wherein,

wherein said gel-electrolyte layers comprise an electrolyte salt, a nonaqueous solvent and a matrix polymer.

8-9. (Canceled).

10. (Original) The method of claim 7, wherein said wound electrodes are subjected to heat treatment for ten minutes.

11. (Currently amended) The method of claim 8 7, wherein said solid electrolyte gel-electrolyte layers comprise one of LiPF₆, LiAsF₆, LiBF₄, LiClO₄, LiCF₃SO₃, Li(CF₃SO₂)₂N and LiC₄F₉SO₃ or their mixture.

12. (Currently amended) The method of claim 8 7, wherein said matrix polymer is any one of polyacrylonitrile, polyvinylidene fluoroide, polytetrafluoroethylene, polyhexafluoropropylene, polyethylene oxide, polypropylene oxide, polyphosphagen, polysiloxane, polyvinyl acetate, polyvinyl alcohol, polymethyl methacrylate, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, polystyrene or polycarbonate.

13. (Currently amended) The method of claim 8 7, wherein said swelling solvent is any one of the following nonaqueous solvent[:] is selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ -butyrolactone, γ -valerolactone, diethoxyethane, tetrahydrofuran, 2-methyltetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethylcarbonate, diethyl carbonate or ethylmethyl carbonate or their mixture.

14. (Previously Presented) The method of claim 7 further comprising inserting said wound electrodes into a film pack.

15. (Currently amended) The method of claim 14 further comprising subjecting said film pack to heat treatment so that said solid-electrolyte gel-electrolyte layers formed on said positive electrode and said solid-electrolyte gel-electrolyte layers formed on said negative electrode are integrated with each other into one continuous seamless layer.

16. (Canceled)

17. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

forming solid-electrolyte gel-electrolyte layers on both sides of a positive electrode and a negative electrode, wherein one of said solid-electrolyte layers formed on said positive electrode and one of said solid-electrolyte gel-electrolyte layers formed on said negative electrode face each other;

winding said positive electrode and said negative electrode after pressing; and

subjecting said wound electrodes to heat treatment at about 70°C for about 10 minutes so that said solid-electrolyte gel-electrolyte layers formed on said positive electrode and said solid-electrolyte gel-electrolyte layers formed on said negative electrode are integrated with each other into one continuous seamless layer,

wherein,

wherein said gel-electrolyte layers comprise an electrolyte salt, a

nonaqueous solvent and a matrix polymer.